

DESCRIPTION OF PLATE XLVII.

Fig. 1. Male Fin-whale (*Physalus antiquorum*), 61 feet in length, stranded near Portsmouth, November 20th, 1869.

2. Anterior portion of the roof of the mouth, showing the baleen *in situ*.
 - a. Smooth median ridge of the palate.
 - b. Filamentous inner surface of the baleen.
 - c. Small, anterior, reclined baleen-plates.
3. Outline of the tail.

2. On some of the Fishes in the Calcutta Museum.

By FRANCIS DAY, F.Z.S., F.L.S.—Part III.*

At the commencement of these papers on the Fishes in the Calcutta Museum, I proposed offering some remarks on Hamilton Buchanan's MS. ichthyological drawings, which I have had the opportunity of fully examining whilst in Calcutta. I find, however, objections exist to this course, as it is advanced that my observations should be addressed to the Society to whom those drawings belong; consequently, should I give my views publicly, I must reserve them for the consideration of the Asiatic Society of Bengal.

I have, however, a few more remarks to make upon the Fishes of the Calcutta Museum. Amongst the specimens I have been unable to find some of Mr. Blyth's types; but having fortunately recognized several of the species in Burma, I shall be able, when adverting to the fishes of that country, to remark upon them.

A crest on the head. Dorsal fin notched.

SALARIAS ANDAMENSIS, sp. nov.

D. 12/22. P. 15. V. 4. A. 22-24. C. 11.

Length of head $\frac{1}{6}$, of pectoral $\frac{1}{7}$, of caudal $\frac{2}{11}$ of the total length. Height of body $\frac{1}{5}$ of the total length.

Eyes. Diameter $\frac{1}{3}$ of length of head.

Mouth very oblique, directed downwards and forwards; snout obtuse, vertical; the maxilla extends to beneath the posterior margin of the orbit. Tentacle above orbit two-thirds as long as the eye. Occipital crest rather high. A small fringed tentacle at the nostril.

Teeth in a single row, with a large canine internally on either side of the lower jaw.

Fins. A rather deep notch between the two divisions of the dorsal fin; the posterior extremity of the dorsal is not connected by membrane to the caudal; the central rays of caudal the longest.

Lateral line in upper fourth of body, commencing to curve downwards opposite the eighth dorsal spine, after which it soon becomes lost.

Colours. Brownish, with ten brown bars along the centre of the body, and a row of oblong pearl-coloured spots with dark margins along the middle of the last half of the body, and a second row

* See Part I, p. 511, and Part II, p. 548.

below. Dorsal fin with a dark margin edged with white, and the posterior portion of the second dorsal spotted. Anal edged with black. Pectoral and ventral white. Caudal barred in about six lines on either side of the fin. Head dark in its anterior portion.

Two specimens up to 4 inches were brought from the Andaman Islands and presented to the Museum by Dr. J. Anderson.

One specimen, 3 inches long, from the same locality was presented by Capt. Hodges, who also gave what appears to be the same species $1\frac{7}{10}$ inch long, but wanting both the crest and orbital tentacle.

In the Museum I find the specimens of *Saccobranchus* considered to be the *S. fossilis*, Bloch, and that to be identical with *S. singio*, Ham. Buch. Dr. Günther, however, in his elaborate 'Catalogue of Fishes' (vol. v. pp. 30, 31), holds a different view. Having taken some trouble to elucidate this question, I will here offer a few reasons for dissenting from this division (as it appears to me) of the species. Dr. Günther's diagnosis may be summed up as follows:—

SACCOBRANCHUS SINGIO. A. 68 to 70 rays. Height of body $\frac{1}{7\frac{1}{2}}$, length of head $\frac{1}{6\frac{1}{3}}$ of the length of the body. Eye 2 diameters from end of snout. Maxillary cirri extend to or beyond the pectoral fin; pectoral spine $\frac{3}{4}$ of length of head. Ventral fin reaches to third or fourth anal ray. A notch between anal and caudal fin.

SACCOBRANCHUS FOSSILIS. A. 70. Height of body $\frac{1}{7}$, length of head $\frac{1}{6}$ of the length of body. Eye 3 diameters from end of snout. Maxillary cirri extend to middle or end of the pectoral fin; pectoral spine $\frac{2}{3}$ as long as head. Ventral fin reaches the origin of the anal. Anal and caudal fins scarcely separated by a notch.

First, as regards coloration, it is no criterion in this species. In Burmese specimens, as a rule, there are two longitudinal yellowish-white bands; this I have never seen in India.

Next, as regards fin-rays. Out of thirty specimens I found as wide a variety as from A. 60-79, yet the species was evidently the same in all.

The height of the body depends on the time of year, whether they are captured from sluggish streams or tanks, or from localities well or badly supplied with food. Thus, out of several from one tank at Pegu, where food was plentiful, the height of the body was from $\frac{1}{4\frac{1}{2}}$ to $\frac{1}{7}$ of the length of the body; in Malabar $\frac{1}{7}$ of the same; in Mysore $\frac{1}{6\frac{1}{4}}$ of the body. Were the depth alone of much specific value, some of the Burmese species would differ from the Malabar, and those again from the Mysore ones.

As to the length of the head, out of thirty specimens it differed from $\frac{1}{5\frac{1}{2}}$ to $\frac{1}{7}$ of the length of the body.

The size of the eye differs with age, as does also the pectoral spine.

As regards the notch between the anal and caudal fins, its comparative size varies considerably.

There is one subject, however, to be kept in mind respecting this

species of fish, that both it and the *Clarias magur*, H. B., are extensively bred in India and the East for stocking tanks. There is hardly any thing which pays better, whilst the trouble is but slight. Domestication causes a wide difference in a few generations even in fishes; and an overstocked tank will give a larger proportion of the lanky *S. fossilis*, Bl., than the stouter-looking *S. singio*, H. B.

In the 'Journal of the Asiatic Society of Bengal' (1860, p. 156), Mr. Blyth gives a short description of *Pseudosilurus macrophthalmus*, sp. nov., from Burma, specimens of which I was unable to find in the collection, but I recognize it in the following, which I procured in the Irrawaddi.

CALLICHOUS MACROPHthalmus, Blyth.

D. 4. P. $\frac{1}{12}$. V. 6. A. 74-76. C 17.

Length of head $\frac{2}{15}$, of pectoral $\frac{2}{13}$, height of body $\frac{2}{9}$ of the total length.

Eyes. Diameter $\frac{1}{3}$ of length of head, 1 diameter from end of snout, $2\frac{1}{2}$ diameters apart.

Lower jaw prominent; maxillary cirri reach to the middle of the length of the fish, their extremities being very fine; mandibular ones to the gill-opening.

Teeth in cardiform bands in both jaws; in a single or double series across the vomer, interrupted in the middle.

Fins. Pectoral spine as long as the head without the snout, strongly serrated internally in its last half. A deep notch between the posterior extremity of the anal and the commencement of the caudal, which latter is deeply lobed, the lower one being the longest.

Colours. A well-developed round black blotch exists above the posterior third of the pectoral fin. Body greenish along the back, sides silvery, abdomen shot with purple. Opercles covered with fine spots and glossed with a golden colour.

Differs from *C. bimaculatus* in the larger size of the eye, the greater length of the pectoral spine and maxillary cirri, as well as in the extent of the anal fin, &c.

Hab. The Irrawaddi and its branches.

POLOTUS NITIDUS, Blyth (J. A. S. of Bengal, 1858, p. 282), is doubtless the *Coius gudgutia*, H. Buch. (pp. 94, 370), as subsequently observed by Mr. Blyth (*l. c.* 1860, p. 111); but it is not a *Mesoprion* as he suggested, but the *Pristipoma hasta*, Bl.

CHÆTODON LAYARDI, Blyth, in Kelaart's 'Prod. Faun. Zeylan. Appendix' (p. 50), is *Chætodon vittatus*, Bl. Schn.

PHRACTOCEPHALUS ITCHKEEA, Sykes (Trans. Zool. Soc. ii. p. 373, t. 67. f. 1), is not a *Macrones* as suggested by Dr. Günther (Catal. v. p. 84), but is identical with *Pimelodus cenia*, H. Buch. (pp. 174, 376, pl. 31. f. 57), a *Hemipimelodus* of Bleeker. It is fully described in my paper "On the Fishes of Orissa." (See *antèa*, p. 308.)

HARA FILAMENTOSA, Blyth (J. A. S. of Bengal, 1860, p. 152), and which I described when remarking on that genus in the "Fishes of Orissa," is doubtless the *Pimelodus conta*, Ham. Buch. (pp. 191, 379). It is abundant in Burma.

PERILAMPUS FULVESCENS, Blyth (J. A. S. of Bengal, 1860, p. 163), is, I find, merely a variety of the *Perilampus laubuca* of Ham. Buch. (pp. 260, 384). I have procured all the intervening grades in Burma.

3. On the Freshwater Fishes of Burma.

By FRANCIS DAY, F.Z.S., F.L.S.—Part I.

In the course of the following papers I propose describing the Freshwater Fishes of Burma, or rather those which I have obtained during my tour whilst inspecting the fisheries of Pegu, and in the course of a hurried visit I paid to the capital of Upper Burma. In doing this I shall first detail (without arrangement) some species which appear to me to be undescribed or doubtful, next give a short general notice of the fishes, with observations upon any thing peculiar which I may have observed respecting them, and lastly a retrospect of the geographical distribution of the fishes of this portion of the east.

The period of the year during which my investigations extended being the monsoon months, was against collecting; but my duties were to investigate the fisheries and how the young were being looked after, consequently my own scientific collection was obliged to be a secondary consideration.

I am unaware of any one having written much respecting the ichthyology of this region. Mason, in his account of Burma, observes that it is probably the same as that of Bengal, but his list is very incorrect in many respects. Cuvier and Val. received a few specimens from the Irrawaddi; and Major Berdmore transmitted others to the Asiatic Society of Bengal.

My tour extended from Rangoon by boat to Bassein through the various creeks, then up the Dugga river to the Eeen-gay-gyee Lake fishery, returning to Rangoon by Bassein, being unable to pass into the Irrawaddi. From Rangoon by steamer about 650 miles up the Irrawaddi to Mandalay, returning by the same route to Prome; then by boat down the river. Next to Moulmein; then, having returned to Rangoon up the Pegu river, to Pegu, across country to Sittoung, down that river to Billing, then across country to Salwein, and so down again to Moulmein—these last two rivers being in Tenasserim.

No adipose eyelids.

MUGIL HAMILTONII, sp. nov.

? *Mugil cascasia*, Ham. Buch.

D. 4 $\frac{1}{5}$. P. 13. V. $\frac{1}{5}$. A. $\frac{3}{9}$. C. 15. L. 1. 44. L. tr. 18.